
A-level
PHYSICAL EDUCATION
7582/2

Paper 2 Factors affecting optimal performance in physical activity and sport

Mark scheme

June 2023

Version: 1.0 Final



Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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Level of response marking instructions

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor for the level shows the average performance for the level. There are marks in each level.

Before you apply the mark scheme to a student's answer read through the answer and annotate it (as instructed) to show the qualities that are being looked for. You can then apply the mark scheme.

Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptor for that level. The descriptor for the level indicates the different qualities that might be seen in the student's answer for that level. If it meets the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptor and the answer. With practice and familiarity you will find that for better answers you will be able to quickly skip through the lower levels of the mark scheme.

When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best fit approach for defining the level and then use the variability of the response to help decide the mark within the level, ie if the response is predominantly level 3 with a small amount of level 4 material it would be placed in level 3 but be awarded a mark near the top of the level because of the level 4 content.

Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark. The descriptors on how to allocate marks can help with this. The exemplar materials used during standardisation will help. There will be an answer in the standardising materials which will correspond with each level of the mark scheme. This answer will have been awarded a mark by the Lead Examiner. You can compare the student's answer with the example to determine if it is the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the Lead Examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

Indicative content in the mark scheme is provided as a guide for examiners. It is not intended to be exhaustive and you must credit other valid points. Students do not have to cover all of the points mentioned in the Indicative content to reach the highest level of the mark scheme.

An answer which contains nothing of relevance to the question must be awarded no marks.

Section A

Exercise physiology and biomechanics

0 1

Which **one** of the following dietary supplements will improve the mobilisation of fatty acids in the body?

[1 mark]

Marks for this question: AO1 = 1

A – Caffeine

0 2

Figure 1 shows a sprinter during a training session.

Identify the forces labelled **X** and **Y** in **Figure 1**.

[1 mark]

Marks for this question: AO2 = 1

B – X: Air resistance Y: Internal-muscular force

0 3

The phases of the training season are preparation, competition, and transition.

Describe the main focus of training in **each** of these phases.

[3 marks]

Marks for this question: AO1 = 3

- Preparation – Quantity over quality/to develop fitness levels/general conditioning. (1)
- Competition – Quality over quantity/to refine skills and tactics/maintain fitness levels. (1)
- Transition – Active recovery/to recover whilst maintaining some fitness. (1)

Accept any other appropriate description of the main focus of training in each of these phases.

Maximum 3 marks

0 4

Give three sporting examples of how a swimmer can reduce drag during a race.

[3 marks]

Marks for this question: AO2 = 3

- Ensuring they're in a streamlined position (accept appropriate examples of a streamlined position) (1)
- Wearing a swimming hat. (1)
- Wearing specialised swimwear. (1)
- Removing body hair. (1)

Accept any other appropriate example of how the swimmer can reduce the effect of drag throughout a race.

Maximum 3 marks

- 0 5 . 1** Newton's laws of linear motion can be adjusted to explain the movement of rotating bodies, known as angular motion.

State Newton's first law of angular motion.

[1 mark]

Marks for this question: AO1 = 1

A body will continue rotating/spinning with a constant angular velocity unless acted upon by an external torque/rotational force. (1)

Accept any other appropriate recollection of Newton's first law of angular motion.

Maximum 1 mark

- 0 5 . 2** **Figure 2** shows a figure skater rotating in the air during a jump.

Analyse how Newton's laws of angular motion can account for the figure skater's speed of rotation throughout the movement

[3 marks]

Marks for this question: AO3 = 3

- (Newton's first law of angular motion) The ice skater will rotate with constant angular momentum in the air if there is no external torque/rotational force slowing them down until they land back on the ice. (1)
- (Newton's second law of angular motion) The more torque/rotational force the skater pushes off the ice the faster they will rotate allowing them to complete their rotations before returning to the ice. (1)
- (Newton's third law of angular motion) When the rotating figure skater lands back on the ice the torque they apply to ice is returned to them slowing them down. (1)
- (Newton's third law of angular motion) At take off the ice skater will apply a torque to the ice which will generate torque in the opposite direction causing the skater to rotate. (1)

Accept any other appropriate analysis of how Newton's laws of angular motion can account for the figure skaters speed of rotation throughout the movement.

Maximum 3 marks

0 6

A sprinter is driving out of the blocks in a 100 m race.

Analyse how the lever systems operating at the ankle **and** knee give the sprinter an effective start.

Include fully labelled diagrams of the lever systems in your answer.

[8 marks]

Marks for this question: AO1 = 2, AO2 = 3, AO3 = 3

Students are expected to answer in continuous prose, use good English, organise information clearly and use specialist vocabulary where appropriate.

Level	Marks	Description
4	7–8	Knowledge is consistently accurate and well detailed. Application of breadth or depth of knowledge is clearly evident. Analysis and/or evaluation is coherently and consistently made between different relevant factors and their impact. Relevant terminology is consistently used. The answer almost always demonstrates substantiated reasoning, clarity, structure and focus.
3	5–6	Knowledge is usually accurate and detailed. Application of breadth or depth of knowledge is often evident. Analysis and/or evaluation is often made between different relevant factors and their impact, and is usually coherent. Relevant terminology is often used. The answer usually demonstrates substantiated reasoning, clarity, structure and focus.
2	3–4	Knowledge is sometimes accurate with some detail. Application of breadth or depth of knowledge is sometimes evident. Analysis and/or evaluation is sometimes made between different relevant factors and their impact, but may lack coherence. Relevant terminology is sometimes used. The answer occasionally demonstrates substantiated reasoning, but may lack clarity, structure and focus.
1	1–2	Knowledge may be limited. Application of breadth or depth of knowledge may be limited or not evident. There may be little or no analysis and/or evaluation between different relevant factors and their impact. Relevant terminology is occasionally used. The answer may lack substantiated reasoning, clarity, structure and focus.
	0	No relevant content.

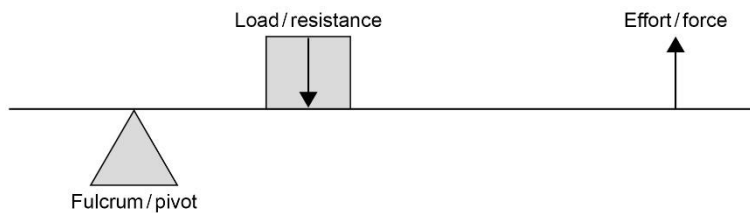
Possible content may include:

AO1: Knowledge of lever systems (can be credited in diagrams)

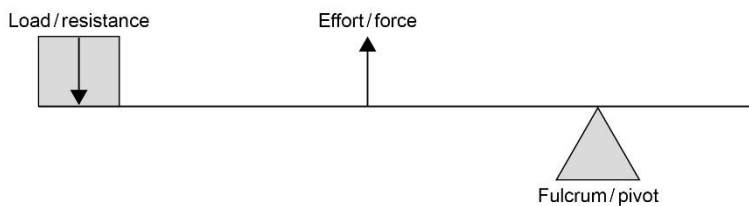
- Lever systems are made up of three components: the effort, fulcrum, and resistance.
- In linear diagrams the effort is represented as an arrow, the fulcrum by a triangle, and the resistance as a square/arrow.
- 2nd class – resistance in middle/3rd class effort in middle.
- Mechanical advantage is calculated as effort arm divided by resistance arm.

AO2: Application to 100 m start

- Ankle is a second-class lever system.



- Knee is a third-class lever system.



AO3: Analysis of how the lever systems operating at the ankle and knee allow an effective start in the 100 m

- The second-class lever system at the ankle has a high mechanical advantage as the effort arm is longer than the resistance arm.
- This allows the lever system to produce more force relative to the effort produced by the gastrocnemius muscle.
- This allows the sprinter to drive out of the blocks with greater force/overcome inertia more easily/accelerate faster.
- The third-class lever system at the knee has a low mechanical advantage/mechanical disadvantage as the effort arm is shorter than the resistance arm.
- While this means the knee requires more effort to overcome the resistance it does, however, mean that the lever system can move quickly and over a large range of motion.
- This allows the sprinter to cover a larger distance quickly as they drive out of the blocks using their large quadricep muscles to apply the necessary force.
- The two lever systems combine/complement each other to produce powerful start with high force and speed.

Accept any other appropriate analysis of how the lever systems operating at the ankle **and** knee give the sprinter an effective start with fully labelled diagrams of the lever systems included in the answer.

Maximum 8 marks

0	7
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Analyse how using a hyperbaric chamber would help rehabilitation from a muscle strain.

Refer to the following in your answer:

- gas exchange at the alveoli and muscles
- transportation of oxygen.

[15 marks]

Marks for this question: AO1 = 4, AO2 = 5, AO3 = 6

Students are expected to answer in continuous prose, use good English, organise information clearly and use specialist vocabulary where appropriate.

Level	Marks	Description
5	13–15	Knowledge is consistently comprehensive, accurate and well detailed. Application of breadth or depth of knowledge is clearly evident. Analysis and/or evaluation is coherently and consistently made between different relevant factors and their impact. Relevant terminology is almost always used. The answer demonstrates a high level of substantiated reasoning, clarity, structure and focus.
4	10–12	Knowledge is usually comprehensive, accurate and detailed. Application of breadth or depth of knowledge is often evident. Analysis and/or evaluation is often made between different relevant factors and their impact, and is usually coherent. Relevant terminology is usually used. The answer usually demonstrates substantiated reasoning, clarity, structure and focus.
3	7–9	Knowledge is generally accurate and sometimes detailed. Application of breadth or depth of knowledge is sometimes evident. Some analysis and/or evaluation is made between different relevant factors and their impact, but may sometimes lack coherence. Relevant terminology is used but may sometimes be missing. The answer sometimes demonstrates substantiated reasoning, clarity, structure and focus.
2	4–6	Knowledge is sometimes accurate but may lack detail. Application of breadth or depth of knowledge is occasionally evident. Some analysis and/or evaluation is attempted between different relevant factors and their impact, but is likely to lack coherence. Relevant terminology is occasionally used. The answer occasionally demonstrates substantiated reasoning, but may lack clarity, structure and/or focus at times.
1	1–3	Knowledge is limited and may lack accuracy and detail. Application of breadth or depth of knowledge is likely to be limited or not evident. There may be very little or no analysis and/or evaluation made between different relevant factors and their impact. Relevant terminology used only very occasionally. The answer often lacks substantiated reasoning, clarity, structure and/or focus.
	0	No relevant content.

Possible content may include:

AO1 Knowledge of a hyperbaric chamber, gas exchange and transportation of oxygen

- **Hyperbaric chamber:** The chamber delivers oxygen at high pressure.
- Approximately 2.5 more times than normal/100% pure oxygen.
- **Muscle strain:** The fibres of the muscle are stretched too far/tear.
- **Gas exchange:** Movement of gases by diffusion. Diffusion is the movement of gases from an area of high partial pressure to low partial pressure.
- **Transport of oxygen:** Red blood cells contain haemoglobin which transports oxygen around the body.

AO2 Application of a hyperbaric chamber to a muscle strain with reference to gas exchange and transportation of oxygen

- High partial pressure of oxygen in the chamber means that there is a larger diffusion gradient between the air in the alveoli and the blood in the capillary.
- More oxygen will diffuse into the blood ensuring that haemoglobin becomes fully saturated with oxygen, forming more oxyhaemoglobin.
- Excess oxygen will also dissolve into the blood plasma.
- As a result, more oxygen will reach the injured muscle than under normal atmospheric conditions.
- Due to the higher diffusion gradient between the blood and muscle cells more oxygen will diffuse into the injured muscle.
- Myoglobin in the injured muscle cells will pull additional oxygen into the muscle.

AO3 Analysis of how the use of a hyperbaric chamber would result in faster rehabilitation from a muscle strain

- (Increased oxygen supply to the injury site) will speed up rehabilitation from a muscle strain.
- (Increased oxygen supply to the injury site) is used by the mitochondria for energy production to power the faster recovery of the muscle fibres.
- (Increased oxygen supply to the injury site) has an anti-inflammatory effect reducing the pressure/swelling in the muscle.
- This may reduce the athlete's perception of injury allowing more natural movement, thus limiting any additional complications due to a change in movement patterns.
- (Increased oxygen supply to the injury site) stimulates the production of more white blood cells in the muscle.
- These blood cells encourage growth and regeneration of the injured muscle fibres in the muscle.

Accept any other appropriate analysis of how using a hyperbaric chamber would help rehabilitation from a muscle strain with reference to:

- gas exchange at the alveoli and muscles
- transportation of oxygen.

Maximum 15 marks

Section B

Sport psychology

0 8

'The belief in your ability to master a specific sporting situation.'

Which term is described in this statement?

[1 mark]

Marks for this question: AO1 = 1

B – Self-efficacy

0 9

Zajonc classified 'others present in sport' into four categories.

While participating in badminton there are players involved in a match on the court next to yours.

Which **one** of these categories would these players be placed in?

[1 mark]

Marks for this question: AO2 = 1

B – Co-actor

1 0 1

Define the term 'attribution'.

[1 mark]

Marks for this question: AO1 = 1

- Perceived (accept suitable alternative) reason for success or failure. (1)

Accept any other appropriate definition of the term attribution.

Maximum 1 mark

- 1 0 . 2** Describe the link between attribution and task persistence when an athlete encounters:
- success
 - failure.

[2 marks]

Marks for this question: AO1 = 2

Success (sub max 1)

- Where success is attributed to internal stable factors/ability task persistence will be higher. (1)
- Where success is attributed to unstable factors/effort/luck, persistence will be lower. (1)
- Where success is attributed to external factors/luck/task difficulty persistence will be lower. (1)

Failure (sub max 1)

- Where failure is attributed to internal stable factors/ability task persistence will be lower. (1)
- Where failure is attributed to unstable factors/effort/luck persistence will be higher. (1)
- Where failure is attributed to external factors/luck/task difficulty persistence will be higher. (1)

Accept any other appropriate description of the link between attribution and task persistence when an athlete encounters:

- success
- failure.

Maximum 2 marks

- 1 1 . 1** Outline Steiner's model of group productivity.

[1 mark]

Marks for this question: AO1 = 1

- Actual productivity = potential productivity – (losses due to) faulty processes

Accept any other appropriate recollection of Steiner's model of group productivity.

Maximum 1 mark

- | | |
|---|---|
| 1 | 1 |
|---|---|

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2

 Explain how Steiner’s model accounts for a team winning against a significantly higher-ranked opponent.

[3 marks]

Marks for this question: AO2 = 3

- The lower-ranked team’s actual productivity is at/close to their potential productivity. (1)
- The higher-ranked team’s actual productivity is below their potential productivity. (1)
- (Motivational losses) The players from the higher-ranked team may not believe they have to try as hard to beat lower standard opposition/social loafing occurs where players from the higher ranked team decrease their effort expecting others to do enough to win the game. (1)
- (Co-ordinational losses) The players from the higher ranked team do not concentrate on applying the coach’s tactics as well as they can. (1)

Accept reverse where candidates refer to positive impact on the lower ranked team.

Accept any other appropriate explanation of how Steiner’s model explains why lower-ranked teams can beat higher-ranked teams in football.

Maximum 3 marks

- | | |
|---|---|
| 1 | 2 |
|---|---|

 Evaluate the effectiveness of using questionnaires to measure the anxiety levels of all the players in a rugby squad.

[3 marks]

Marks for this question: AO3 = 3

Effective

- Would only require one person to collect the views of the whole rugby squad making it quick/cheap/efficient. (1)
- The data produced can be interpreted and analysed quickly so the rugby squad could start seeing the benefits to their performance sooner. (1)

Not effective

- Rugby players may give (what they perceive to be) socially desirable responses affecting the validity/reliability (1)
- To elicit valid responses the questionnaires should be taken as close to a game as possible, however this can lead to answers being rushed/the result of the game having an impact on the responses. (1)

Accept any other appropriate evaluation of using questionnaires as a method to measure the anxiety levels of all the players in a rugby squad.

Maximum 3 marks

1 3

A football match ends in a draw. A penalty shoot-out is used to decide the winner of the match. One player refuses to take a penalty.

Analyse why the player refuses to take a penalty **and** the strategies that could be used to encourage the player to take the penalty next time. Refer to Atkinson’s Model of achievement motivation in your answer.

[8 marks]

Marks for this question: AO1 = 2, AO2 = 3, AO3 = 3

Students are expected to answer in continuous prose, use good English, organise information clearly and use specialist vocabulary where appropriate.

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	0	No relevant content.

Possible content may include:

AO1 Knowledge of Atkinson's model and strategies

- Achievement motivation is the tendency to approach or avoid competitive situations/the drive to succeed, minus the fear of failure.
- Need to avoid failure/Naf show avoidance behaviour/avoid risk/avoid challenges/avoid feedback.
- Incentive value/probability of success will influence achievement motivation.
- Strategies – reinforcement/success/attributions/goal setting.

AO2 Application of Atkinson's model and strategies to the player who refuses to take a penalty

- The player who refuses to take a penalty is displaying Naf characteristics/avoidance behaviour.
- They may be worried about the risk of missing/being evaluated whilst taking the penalty.
- The player may feel refusing to take the penalty is the easy option.
- Praise or reward/practice without a goal keeper/attribute scoring penalties to effort and ability/set performance or process goals.

AO3 Analysis of the strategies that could be used to encourage the player to respond differently

- Praise and rewards could be given to players who are prepared to take a risk, showing the player that this is the desired behaviour.
- Allowing the player to experience success in training may help to develop the player's confidence/self-esteem, increasing their perception of their chances of success.
- Encouraging the player to attribute success to internal factors such as effort/ability could encourage approach behaviour.
- Setting performance/process goals that are achievable with effort could enhance the player's confidence making them more likely to agree to take a penalty.

Accept any other appropriate analysis of why the player refuses to take a penalty **and** the strategies that could be used to encourage the player to take the penalty next time.

Maximum 8 marks

1 4

A golfer may use cognitive stress management techniques during an important competition.

Analyse how the golfer could use these techniques to improve their performance in the competition.

[15 marks]

Marks for this question: AO1 = 4, AO2 = 5, AO3 = 6

Students are expected to answer in continuous prose, use good English, organise information clearly and use specialist vocabulary where appropriate.

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	0	No relevant content.

Possible content may include:

A01 Knowledge of relevant cognitive stress management techniques

- Positive self-talk – involves a voice inside the performer’s mind telling them they are capable of success.
- Thought stopping – preventing negative thoughts from entering a performer’s mind.
- Attentional control – where the performer alters their perceptual field/prevents stress by changing their focus to the select relevant stimuli for that situation.
- Mental rehearsal – involves the performer going over the movements in their mind.
- Imagery/visualisation – where the performer imagines a previous successful performance.

A02 Application of how the golfer can use these techniques

- Positive self-talk – ‘I am capable of making this putt’.
- Thought stopping – stopping thoughts such as ‘I am useless at bunker shots’ by clicking fingers/use cue word such as ‘focus’.
- Attentional control – focus on an external-narrow style when putting/blocking out the crowd and focusing on the hole.
- Mental rehearsal – the golfer visualises the various stages of the golf swing.
- Imagery/visualisation – the golfer remembers a successful drive shot/putt from a previous competition.

A03 Analysis of impact of the use of relevant cognitive stress management techniques on the golfer

- Positive self-talk can convince the golfer that they are capable of being successful, which leads to higher confidence.
- Thought stopping prevents negative thoughts from raising self-doubt and anxieties and allows full concentration of the shot they are about to play.
- Attentional control ensures that the golfer focuses only on relevant stimuli avoiding overload of information so they make effective decisions.
- Mental rehearsal ensures that the golfer rehearses the movements that they are going to perform, to ensure they remember the technique.
- Imagery/visualisation ensures that the golfer visualises successful performances and believes that they can be capable of success in the important competition.
- All of these techniques allow the golfer to manage stress, which means they are able to execute effective drives, maintain accurate chipping and putting/accept equivalent benefits to the golfer’s performance as a result of using stress management techniques.

Accept any other appropriate analysis of how the golfer could use cognitive stress management techniques to improve their performance in the competition.

Maximum 15 marks

Section C

Sport and society and technology in sport

1 5

Which set of characteristics **all** apply to physical education?

[1 mark]

Marks for this question: AO1 = 1

B – Compulsory, formal, pre-planned

1 6

Which **one** of the following is the definition of negative deviance?

[1 mark]

Marks for this question: AO2 = 1

A – Behaviour that goes against norms and has a detrimental effect on sport

1 7

Outline **three** ways that National Institutes of Sport can help to improve the performance of an athlete.

[3 marks]

Marks for this question: AO1 = 3

- (Biomechanics) can analyse the movements of an athlete. (1)
- (Psychology) can help an athlete manage stress. (1)
- (Nutrition) can advise an athlete what to eat before/during a race. (1)
- (Physiology) can conduct fitness tests. (1)
- (Performance lifestyle) works with athletes to manage the daily challenges of life. (1)
- (Performance analysis) can collect specific data on an athlete's performance. (1)
- (Sports medicine) can diagnose specific medical issues. (1)
- (Physiotherapy) could provide treatment for an injury. (1)
- (Strength and conditioning) can design training programmes. (1)
- (Performance innovation) can help in the development of new technologies. (1)
- (Facilities) high quality facilities specifically designed for elite athletes. (1)
- (Coaching) provide high level coaching. (1)

Accept any other appropriate outline of **three** ways that National Institutes of Sport can help to improve the performance of an athlete.

Maximum 3 marks

1 8

Explain **three** situations where a footballer would be protected by sports legislation.

[3 marks]

Marks for this question: AO2 = 3

- A player is protected from violent opponents because they could prosecute them/take legal action (decreasing the likelihood of this occurring). (1)
- A player is protected from loss of earning if deliberately injured as they can make a civil claim against the opponent. (1)
- A player whose contract with a club has expired is free to leave because they are protected by employment law/Bosman ruling. (1)
- A player is protected from violent fans/hooligans/pitch invasions because violent spectators face banning orders. (1)
- Players are protected from coaching/refereeing which fails to meet the duty of care as they can be charged with negligence should an injury occur. (1)

Accept any other appropriate explanation of **three** situations where a footballer would be protected by sports legislation.

Maximum 3 marks

1 9 . 1

Drug taking in elite sport is an increasing problem as elite athletes seek to gain an advantage over their opponents.

State **one psychological** reason why performers might use illegal drugs and doping methods to aid performance.

[1 mark]

Marks for this question: AO1 = 1

- Steady nerves/reduces anxiety. (1)
- Improves concentration/focus. (1)
- Increase aggression. (1)
- Raise confidence. (1)

Accept any other appropriate **psychological** reason behind elite performers using illegal drugs and doping methods to aid performance.

Maximum 1 mark

- 1 9 . 2** Analyse how the physiological effects of each of the following drugs can improve performance in the named sports:
- erythropoietin (EPO) taken by a road cyclist
 - anabolic steroids taken by a boxer
 - beta blockers taken by a golfer.

[3 marks]

Marks for this question: AO3 = 3

Erythropoietin (EPO)

- Causes the production of more red blood cells/improve the oxygen carrying capacity of a road cyclist allowing them to cycle at higher intensities for longer. (1)

Anabolic steroids (sub max 1)

- Decrease the recovery time following training/train harder, which would allow a boxer to punch harder. (1)
- Anabolic steroids promote muscle growth, which would allow a boxer to punch harder. (1)

Beta blockers

- Beta blockers reduce the effects of adrenaline/heart rate/tremors, which would help a golfer putt more accurately. (1)

Accept any other appropriate analysis of how the physiological effects of each of the following drugs can improve performance in the named sports:

- erythropoietin (EPO) taken by a road cyclist
- anabolic steroids taken by a boxer
- beta blockers taken by a golfer.

Maximum 3 marks

2 0

Table 1 shows the percentage of people with disabilities who were considered inactive over a 4 year period according to Sport England’s Active People Survey.

Inactivity is defined as taking part in less than 30 minutes of sport or physical activity each week.

Evaluate the impact that the development of new technology and equipment has had on enabling people with disabilities to overcome barriers to participation.

Refer to the data in **Table 1** in your answer.

[8 marks]

Marks for this question: AO1 = 2, AO2 = 3, AO3 = 3

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1	1–2	Knowledge may be limited. Application of breadth or depth of knowledge may be limited or not evident. There may be little or no analysis and/or evaluation between different relevant factors and their impact. Relevant terminology is occasionally used. The answer may lack substantiated reasoning, clarity, structure and focus.
	0	No relevant content.

Possible content may include:

AO1 Knowledge of barriers to participation amongst people with disabilities and technological developments to equipment and facilities

- Barriers faced include, low-income/lack of access to facilities & equipment/negative self-image/lack of confidence/lack of organised competition/few role models/lack of media coverage/lack of specialist coaches/myths/stereotypes.
- Development of lightweight/specialist wheelchairs.
- Development of advanced/specialised/carbon fibre prosthetic devices.
- Development of adapted/sit down skis.
- Adapted facilities, incorporating ramps, lifts, hoists and adjustable floor levels.

AO2 Application of technological developments to disability sport/access to people with disabilities

- Specially designed wheelchairs now produced to support participation in a range of activities eg light-weight chairs for basketball/tennis, racing chairs in track events.
- Advancements in prosthetics, improving gait efficiency, allow amputee athletes to compete in a range of running and cycling based events.
- Adapted equipment now available increases the range of activities open to people with disabilities.
- New/modernised facilities for example those built for the 2012 London Olympic Games allow access to facilities via ramps, lifts and adjustable infrastructure eg swimming pool depth.

AO3 Evaluation of the impact adapted equipment and facilities have had on participation amongst people with disabilities

- The range of adapted equipment now available appears to be leading to a drop in the number of inactive people with disabilities over time/inactivity reduced from 43.3% to 39.8% in the four years shown in Table 1.
- Despite continued improvements in adapted equipment, inactivity increased in 2016–2017 compared to previous year, impact may be questionable.
- New developments in adapted equipment and accessible facilities does not address all the barriers facing people with disabilities, inactivity levels were still almost 40% in 2018/19, other barriers exist.
- Cost of adapted equipment prohibitive to many, may only be available to wealthier, or those competing at a high level, eg Paralympic athletes.
- Data shown is only taken from 4 years making it difficult to see the impact access to adapted equipment and facilities may have on inactivity in people with disabilities.
- Increased interest in disabled sport/media coverage/more role models, may have led to decreased inactivity in Table 1, rather than availability of latest adapted equipment.

Accept any other appropriate evaluation of the impact that the development of new technology and equipment has had on enabling people with disabilities to overcome barriers to participation.

Maximum 8 marks

2 1

Evaluate the impact of the increased commercialisation of sport on coaches **and** the audience. Use sporting examples in your answer.

[15 marks]
Marks for this question: AO1 = 4, AO2 = 5, AO3 = 6

Students are expected to answer in continuous prose, use good English, organise information clearly and use specialist vocabulary where appropriate.

Level	Marks	Description
5	13–15	Knowledge is consistently comprehensive, accurate and well detailed. Application of breadth or depth of knowledge is clearly evident. Analysis and/or evaluation is coherently and consistently made between different relevant factors and their impact. Relevant terminology is almost always used. The answer demonstrates a high level of substantiated reasoning, clarity, structure and focus.
4	10–12	Knowledge is usually comprehensive, accurate and detailed. Application of breadth or depth of knowledge is often evident. Analysis and/or evaluation is often made between different relevant factors and their impact, and is usually coherent. Relevant terminology is usually used. The answer usually demonstrates substantiated reasoning, clarity, structure and focus.
3	7–9	Knowledge is generally accurate and sometimes detailed. Application of breadth or depth of knowledge is sometimes evident. Some analysis and/or evaluation is made between different relevant factors and their impact but may sometimes lack coherence. Relevant terminology is used but may sometimes be missing. The answer sometimes demonstrates substantiated reasoning, clarity, structure and focus.
2	4–6	Knowledge is sometimes accurate but may lack detail. Application of breadth or depth of knowledge is occasionally evident. Some analysis and/or evaluation is attempted between different relevant factors and their impact, but is likely to lack coherence. Relevant terminology is occasionally used. The answer occasionally demonstrates substantiated reasoning, but may lack clarity, structure and/or focus at times.
1	1–3	Knowledge is limited and may lack accuracy and detail. Application of breadth or depth of knowledge is likely to be limited or not evident. There may be very little or no analysis and/or evaluation made between different relevant factors and their impact. Relevant terminology used only very occasionally. The answer often lacks substantiated reasoning, clarity, structure and/or focus.
	0	No relevant content.

Possible content may include:

AO1 Knowledge of commercialisation

- Commercialisation involves using sport to make a profit.
- Sport becomes a commodity/using sport as an asset.
- Commercialisation involves sponsorship and media coverage/involves the golden triangle.
- Includes characteristics such as high number of professionals, sport as entertainment.

AO2 Application of increased commercialisation of sport on coaches and the audience

- More entertainment at events, eg cheerleaders, half-time events.
- More variations of sport eg in cricket 20/20, The Hundred.
- More technology eg ref link, Hawk Eye.
- Pre/post-match interviews for coaches.
- Provision of facilities, St Georges Park,
- More televised sport eg Netball Super League / Women's football
- More financial investment in sport eg better managers

Accept other appropriate examples.

AO3 Evaluation of impact of the increased commercialisation on the coaches and the audience of sport

Positives:

For audience

- Sport frequently televised, therefore more opportunity to watch sport on TV leading to a greater understanding of the sport.
- More money invested into sport leading to greater standard of play for the audience to watch.
- Investment into improved technology giving audience more information about game/audience gain an insight into referee's/umpire's decision making and more excitement through reviews.
- Creation of role models for young people to copy/aspire to emulate leading to greater motivation to play sport.
- More entertainment at events to make them more attractive/enjoyable to the audience.

For coach

- Raises the profile of coaches, leading to more public awareness of them/they become role models.
- Increased financial investment into sport leads to personal benefits such as greater salaries/full time job.
- Increased investment into sport leads to greater standards of facilities/equipment giving coaches a greater opportunity to improve the standards of play.

Negatives:

For audience

- Many matches/events are on subscription channels and can only be afforded by some/increased interest in sport can lead to rise in ticket prices to attend the matches live, limiting opportunities to spectate for those who can't afford it.

- Advertisement breaks throughout matches can lead to a disjointed viewing experience for audience.
- TV channels can dictate start times of matches which are not always suitable to audience.
- Rule changes/new formats of sports not appreciated by all audience members, traditionalists may not like adaptations that commercialisation has led to.
- Deviancy within matches has increased, which can impact audience enjoyment of the game eg diving to win penalties, use of performance enhancing drugs.

For coach

- Increases the expectations and pressure on coaches to win, which could lead to job losses for poor performances.
- Increased media scrutiny which could result in an invasion in privacy.
- Demands placed upon coaches for media obligations such as conducting interviews could add pressure to coach's time.

Accept any other relevant evaluation of the impact of the increased commercialisation of sport on coaches **and** the audience.

Maximum 15 marks